# Jet User Meeting

Sept 19th, 2012

# Agenda

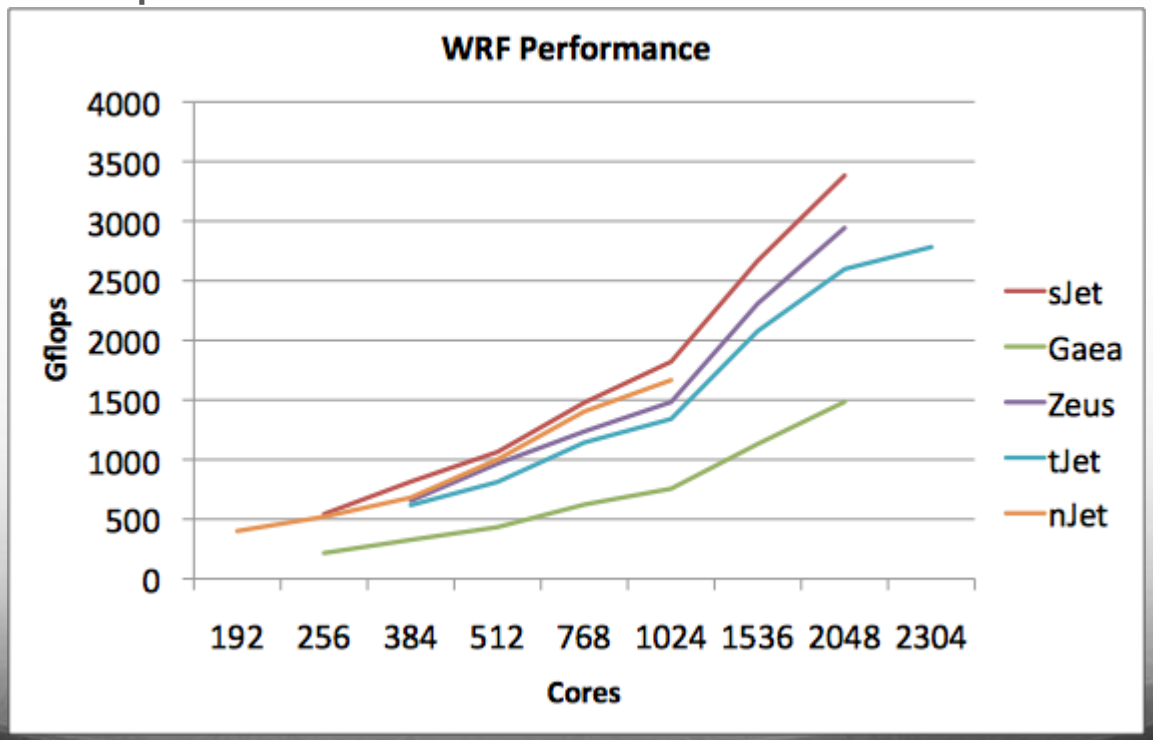
- Latest HFIP System, sJet
- Transition to new OS Image for Jet
- Q&A

# sJet

- sJet is the latest HFIP system to be delivered to ESRL.
  - Intel Sandy Bridge
    - 5440 cores
    - 2.6 GHz
    - 2 GB/core
  - /lfs2
    - 1.1PB (yes that is PetaBytes!)
    - Provides additional storage for decommissioned /pan1 and lfs0

# sJet

- Performance is very good
  - 30% faster per core on WRF
  - 2x faster per node on WRF



# Transition to new OS

- sJet required a complete upgrade of the OS
- We need to move the rest of Jet to this OS for many reasons
  - Difficult to maintain to keep up with security patching with old OS
  - Difficult to get software fixed on older OS
  - New 3rd party tools (like compilers) will be depreciated on older OS platforms
  - Easy of Management, we do not have the staff to keep two separate systems going long term.

# Features of new OS

- Most things work like they did before.
  - However, the system will be configured more like Zeus
- Modules will not be loaded for the user by default
- Batch system is changing to what is on Zeus
  - Moab is the resource manager
  - Torque is the batch system

# Features of new OS

- Compilers
  - Intel, PGI, and Lahey (for development testing only)
- MPI
  - Mvapich2 and OpenMPI open source stacks
- OS
  - CentOS 6.3
- All the tools you are used to on Jet and on Zeus will be installed
  - netcdf3, netcdf4, hdf4, hdf5, display, R, svn, cvs,git, numpy, makedepf90, scipy, python-matplotlib, grads, IDL, java, ncl, udunits, tau, nco (and many others)

# Rules for software installation

- If it is in the OS, we will install it*
- (New) If it is in the EPEL repository, we will install it*
  - http://fedoraproject.org/wiki/EPEL
- If it is not found in these two, we will consider it on a case by case basis.
- A contrib directory will be setup for packages that we cannot maintain, but a user is willing to install and support.

* Exceptions to the rules
1. We will not support 32-bit libraries
2. Packages that conflict with any required packages (like netcdf3/4 and hdf5)
3. If the package requires other dependencies we cannot manage due to conflicts with other software, we will not install them (GMT is one example)

# Schedule

- Sept 19th - Today
  - sJet, 75% of hJet, and fe[6-8] are running the new OS
  - You can login to "newjet" after logging into Jet and this will login you into one of front ends running the new OS.
- Sept 27th - Documentation Ready
- Oct 1st - Rest of hJet will be migrated
- Oct 24th - Move GPU clusters
- Nov 1st
  - Hurricane season ends
- Nov 5th - Move nJet (HFIP) and ncomp (RDHPCS/FAA)
- Nov 12th - Move uJet
- Nov 26th - Move tJet

# How to get started

- hJet is available for porting and testing
  - Do not compile with -xSSE4.2, it is not supported
  - Please do not run production jobs here use it to test scripts and codes
- The documentation will not be completed for about 2 weeks, however, if you want to get started now:

https://jetdocs.rdhpcs.noaa.gov/wiki/index.php/Getting_Started_on_sJet

# Q&A

Any Questions?